With the Author's Compliments.

THE JUBILEE

OF

ANÆSTHETIC MIDWIFERY

AN INAUGURAL ADDRESS

TO THE

GLASGOW GYNECOLOGICAL AND OBSTETRICAL SOCIETY,
ON TUESDAY, 19th JANUARY, 1897, BY
THE HON. PRESIDENT

SIR ALEXANDER R. SIMPSON, M.D., D.Sc., LL.D.,
EMERITUS PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF EDINBURGH

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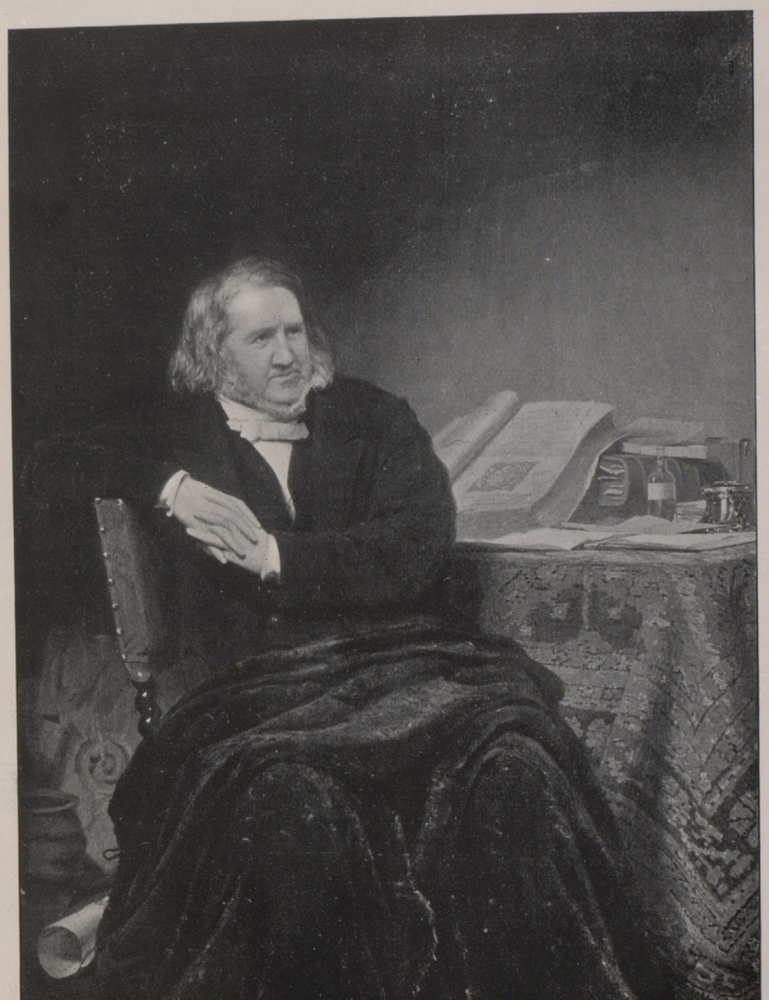


SIR JAMES Y. SIMPSON.

(From a portrait by Norman Macbeth, R.S.A., in the possession of Sir Alexander Simpson.

THE JUBILEE OF ANÆSTHETIC MIDWIFERY.

By Sir A. R. SIMPSON, M.D., D.Sc., LL.D.,
Emeritus Professor of Midwifery in the University of Edinburgh.

Mr. President and Gentlemen,—My first duty in meeting you to-night is to offer you my hearty thanks for the distinction you have conferred on me in electing me as your honorary president. It is a high honour to preside over a Society which, though young in years, has already made valuable contributions to the progress of obstetrics and gynecology, and it affords me peculiar gratification to be brought into this pleasant relationship, alike with the younger workers in the field and with the older obstetricians whose friendship I had the happiness to gain during the years when I was a practitioner of medicine in Glasgow from 1865 to 1870.

I am well disposed to believe that these former friendships have conspired with your generous appreciation of what work I may have done, or encouraged younger men to do, in leading you to pay me this welcome compliment. But whenever I am called to occupy the presidential chair of an obstetrical society, it always comes back to me that there's more in a name than Shakespeare's lovelorn Juliet was willing to allow; and I have fancied that some of you thought it fitting that the session that should see the jubilee of anæsthetic midwifery should have a Simpson for its honorary president.

The First Anæsthetic Labour.

I proposed to your secretary to meet you to-day, because it was on a Tuesday, the 19th of January, fifty years ago, that J. Y. Simpson first made a woman in labour breathe the vapour of sulphuric ether and

delivered her in her sleep. The case and its results were stated publicly on the following day—first to his class in the University, and later in the evening to his brethren in the Obstetrical Society. In the February number of the *Edinburgh Monthly Journal for Medical Science* some details were published; and in "Notes on the Inhalation of Sulphuric Ether in the Practice of Midwifery," which appeared in the March number of that *Journal*, it is more fully recorded thus:—

"The first case in which I employed the ether vapour occurred on the 19th of January. The pelvis of the mother was greatly contracted in its conjugate diameter from the projection forwards and downwards of the promontory of the sacrum; the lumbar portion of the spine was distorted, and she walked very lamely. The present was her second confinement. Her first labour had been long and difficult; she began to suffer on a Monday, and, after a protracted trial of the long forceps, was at last delivered by craniotomy late on the subsequent Thursday night. Even after the cranium had been fully broken down, a considerable time and much traction had been required to drag the diminished and mutilated head of the infant through the contracted brim of the pelvis, and she was long in recovering. Contrary to the urgent advice of her medical attendant, Mr. Figg, he was not made aware of her present or second pregnancy till she had arrived at nearly the end of the ninth month. It was thus too late to have recourse to the induction of premature labour, which had been strongly pressed upon her as the only means of saving her child, should she again fall in the family way. The pains of her second labour commenced in the forenoon of the 19th. I saw her with Mr. Figg at 5 o'clock in the afternoon, and again at 7 o'clock. The os uteri was pretty well dilated, the liquor amnii not evacuated, the presenting head very high, mobile, and difficult to touch; and a pulsating loop of the umbilical cord was felt floating below it in the unruptured bag of membranes.

"From 5 to 9 o'clock the pains seemed only to push the circle of the os uteri further downwards, without increasing its dilatation or making the head in any degree enter into the pelvic brim. Assisted by Dr. Ziegler, Dr. Keith, and Mr. Figg, I shortly after 9 o'clock made the patient inhale the ether vapour. As she afterwards informed us, she almost immediately came under the anodyne influence of the ether. But in consequence of doubts upon this point, its use was continued for nearly twenty minutes before I proceeded to turn the infant (as I had previously predetermined to do). A knee was easily seized, and the child's extremities and trunk readily drawn down; but extreme exertion was required in order to extract the head. At length it passed the contracted brim with the anterior part of its right parietal bone deeply indented by pressure against the projecting promontory of the sacrum, and the whole cranium flattened and compressed laterally. The infant gasped several times, but full respiration

could not be established. The transverse or biparietal measurement of its head, at the site of the indentation, was, in its compressed state, not more than 2½ inches. Hence we judged the conjugate diameter of the pelvic brim not to exceed this. The infant was large, and rather above the usual size. It weighed 8 lbs. On afterwards examining the head and removing the scalp, no fracture could be found at the seat of the indentation. The thin parietal bone had merely bent inwards.[1]

"On questioning the patient after her delivery, she declared that she was quite unconscious of pain during the whole period of the turning and extracting of the infant, or, indeed, from the first minute or two after she first commenced to breathe the ether. The inhalation was discontinued towards the latter part of the operation, and her first recollections on awaking were 'hearing,' but not 'feeling,' the head of the infant 'jerk' from her (to use her own expressions), and subsequently she became more roused by the noise caused by the preparation of a bath for the child. She quickly regained full consciousness, and talked with gratitude and wonderment of her delivery, and her insensibility to the pains of it. Next day I found her very well in all respects. I looked in upon her on the 24th (the fifth day after delivery), and was astonished to find her up and dressed, and she informed me that on the previous day she had walked out of her room to visit her mother. Mr. Figg informs me that her further convalescence has been uninterruptedly good and rapid."

Inauguration of the Anæsthetic Era.

"Abundant evidence," Simpson had said in publishing his *Notes*, "has of late been adduced, and is daily accumulating in proof of the inhalation of sulphuric ether being capable, in the generality of individuals, of producing a more or less perfect degree of insensibility to the pains of the most severe surgical operations." The first public evidence of the anæsthetic property of ether had been given three months previously in the Massachusetts General Hospital, of Boston, U.S.A., by William Thomas Green Morton; and our Transatlantic brethren did well to choose the 16th of October last to celebrate the Jubilee of the Inauguration of the Anæsthetic Era in Medicine. For it was on the 16th of October, 1846, that Dr. Morton put to sleep a man on whom Dr. J. J. Warren, the senior surgeon of the hospital, operated for a vascular tumour under the jaw with complete success. Mr. Morton was a dentist, on whom some years later the Washington University of Medicine in Baltimore worthily conferred the honorary degree of M.D. Mr. Horace Wells, of Hartford, Connecticut, who had

[1] The skull and casts of the infant's head are preserved in the Obstetrical Museum in the University of Edinburgh, and were exhibited at the meeting.

had Morton first as a pupil and afterwards as a partner in his profession, had demonstrated two years earlier that insensibility to pain could be produced by the exhibition of nitrous oxide gas, sufficient to admit of painless tooth-pulling; but he failed to satisfy the Boston surgeons of the possibility of its systematic employment either in dentistry or general surgery. Dr. Charles Thomas Jackson, professor of chemistry in Harvard University, had made known to Dr. Morton the virtue of sulphuric ether, when the latter was zealously trying to follow up the experiments of Horace Wells. Unseemly disputes arose among them and others who claimed to have forestalled them. But as the mists of controversy cleared away, it became evident that to Morton belonged the chief merit of the discovery, although he had dimmed his fair fame by taking out a patent and trying to make a trade of it.

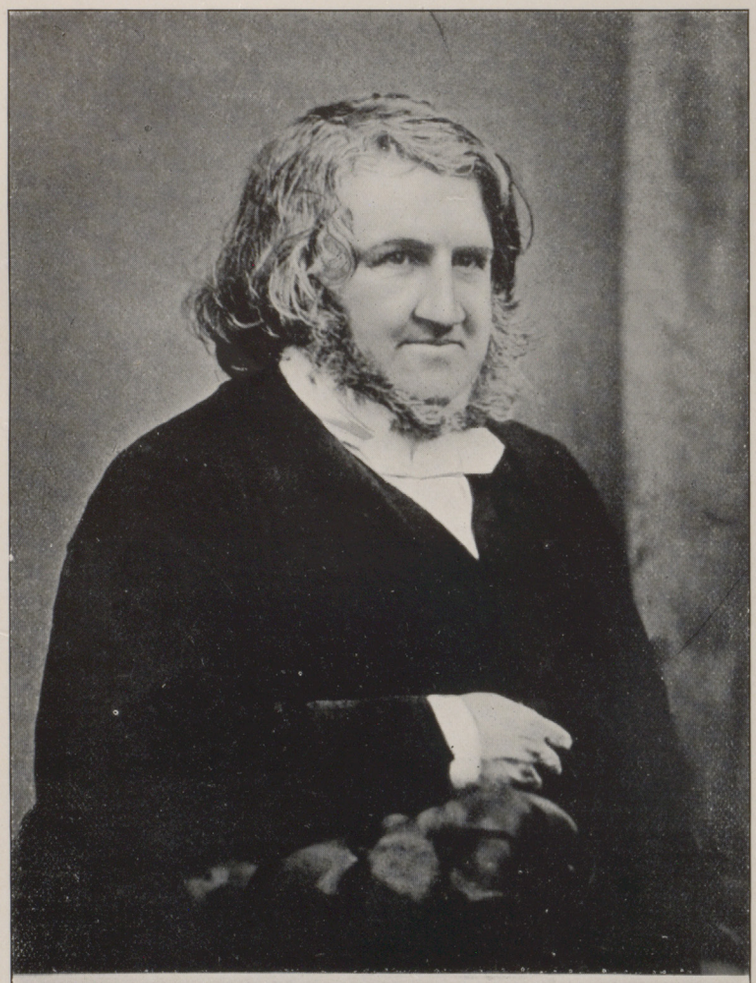
It was needful that someone else should arise to convince alike the profession and the public of the value of anæsthetics, and to secure their use in all the exigencies of practice; and Sir William Fergusson was well within the mark when he said, "It was at least fortunate for anæsthesia that Simpson took it up." Ere humanity could reap the benefit of the discovery, a hard battle had to be fought against ignorance, apathy, and prejudice, and James Young Simpson was the protagonist in the scene.

The Hero in the Strife.

The story of his life may be read in full in the excellent *Memoir* written in 1873 by his learned friend, Professor Duns, or in the more recent vivid sketch in the series of *Famous Scots*, from the pen of his talented daughter. The earliest notice of Simpson occurs curiously enough in the first of two volumes, which contain a record of all the cases of midwifery that occurred in the practice of Mr. Dawson, surgeon in the village of Bathgate in West Lothian, where Simpson was born in 1811. It reads—"275. June 7. Simpson, David, baker, Bathgate. Wife, Mary Jarvey, æt. 40. Lab. nat., easy, rapid. 8th child. Son. Natus 8 o'clock P.M. Uti veniebam natus. Paid 10/6."

His Forebears.

David Simpson came of a race which in earlier generations furnished moss-troopers for border raids, and in more recent times had earned their bread by the hard toil of farmers, quarrymen, and other like peaceful avocations. David's father was a farmer, shrewd and energetic, and renowned in the countryside for his skill in the management of cattle and their diseases. There was a strong streak of superstition in him that came out in various ways. Thus, when a beggar



J. Y. Simpson

woman who was wont to be wheeled in a barrow from one part of the parish to another had had her rest and refreshment at Slackend, he bade a servant lass wheel the old wife away. To his dismay the woman broke out, "I'll hae nae bit hizzy like that to hurl me. Gaur ane o' your five braw lads gang wi' me, or it'll be the waur for this hoose." He remembered that his daughter had sprained her ankle when the woman had been round that way before, and taking it into his head that she was a witch, he whipt a sharp piece of flint out of his pocket and drew a gash across her brow, saying, "Ah, I see what ye're noo, ye auld witch; but I've scored ye aboon the braith, and my hoose is safe."

If James Simpson inherited from his paternal forebears the tireless energy, the patient industry, the readiness for conflict, the resourcefulness in emergencies that were to be in him so signally displayed, his mother transmitted to him qualities that were not less needful for the great career before him. Along both lines happily he inherited a reverence for grace and truth, a certain fearless independence of judgment, and that "firm resolve" which Burns apostrophises as "Thou stalk o' carl-hemp in man." But it was from his mother especially that he drew his exquisite sensitiveness to pain and tender sympathy for sufferers, his rare intuition-like power of rapid perception, his deftness of touch, his silvery voice, and the magnetic attractiveness that worked like a spell on multitudes. For Mary Jervay was of Huguenot descent on her father's side, and among her maternal ancestors she counted kin with some of the gentlest of Scottish blood. In particular the family took delight in tracing back their pedigree to James Cleland of that ilk, who was cousin to Sir William Wallace, and one of his henchmen in the Scottish wars with "proud Edward's power," which, happier than his kinsman, he lived to see broken when he followed Bruce to Bannockburn. She was 40 years of age when she gave birth to her seventh son and youngest child, and she continued to suckle him till he was 3 years old; so that when people would be speaking of their earliest memories he sometimes astonished a fitting company by saying he remembered when he was weaned.

His Boyhood.

In Scotland a seventh son is ever an object of peculiar interest, and the winsome boy who occupied this place in the baker's house seemed at once to bring good fortune with him. Things began to amend in business after he appeared, and the sister who played for many years a mother's part to him proudly foretold his future greatness. As a child he must have been of cherubic innocence. The brother immediately above him in the family would tell how James came to him one day with great glee to show him a halfpenny that his quick

eye had discovered under a stone in the corner of Gideon Street. "My, I wouldna like to be you," said David, with a very grave face. "Glowd-ma-grannie'll hae put it there." (Glowd-ma-grannie was the nickname of the village character who was the terror of the small boys and the butt of the bigger lads of that generation in Bathgate.) "If *he* finds out wha took his bawbee, you'll catch it." The little innocent went and slipped back the coin under the stone, where, of course, David found it by and by. Probably the disappointment was sweetened by one or two of the sugar-balls in which the halfpenny would be invested. That he could acquit himself well in boyish accomplishments may be gathered from the circumstance that when he was careering on stilts once in the gloaming he sent old John Crawford home in a fright, declaring to his household that he had "seen Jamie Simpson's wraith fleeing yont Jervay Street."

The head that, when it came to full development, was to be described, with its long wavy locks, as "Jove-like," was already noted in the youth to be of extraordinary size. When on a visit to his oldest brother at Grangemouth, the village barber there cropped his hair so close that his brother went to remonstrate with the man, who pled that the "callant had sic a muckle heid, I was daein' my best to mak' it look respectable."

Student and General Practitioner.

As in many a Scottish homestead where love reigns, some of the older members stinted themselves to secure the education of the bright young brother who was the sunshine of their home. He learnt so much in his native town as to be able to profit by two years' attendance at the arts classes in the University of Edinburgh, and acquired a taste for literature, and especially such a knowledge of Latin as made it a delight for him in after years to hunt through all kinds of antique volumes to find out what had been known in former times on the many matters that came to engage his interest. For whether the subjects he treated of were more general, or more strictly professional, even when he was obtaining some new outlook and moving on to fresh lines of discovery, he was always eager to trace out the way along which the human mind had travelled; and many of his essays thus form a storehouse of reference for the history of their themes.

When he had studied medicine for three years he was able to obtain the diploma of the Royal College of Surgeons at the age of 19, and was thus qualified to apply for a situation as surgeon to the village of Inverkip. He has said that if chosen he would probably have worked on there as a village doctor all his days. That is not at all likely, but we can well believe him when he says—"When not selected, I felt perhaps a deeper amount of chagrin and disappointment than I have ever experienced since that date."

He spent a season in working sometimes with his friend, Dr. Girdwood, in Falkirk, and more frequently with the family doctor, Mr. Dawson, in Bathgate. The worthy doctor was glad to have his aid in looking after some of his patients and making up their prescriptions, and occasionally got opportunities for him to make the post-mortem examinations which his spirit of scientific investigation prompted him to seek. In one case the old doctor pointed out to him a fistulous opening which had resulted from a central rupture of the perineum during labour, and on the way home remarked that it would have made a fine preparation. "I thought so," said his young assistant, "and I've got it in my pocket." He had a woodcut made of it years afterwards to illustrate his lectures, and here is the preparation still. In making his visits in the country he took note of the antiquities and natural history of the district, and made a special note of a bed of *Senecio saracenicus* growing at Kirkroads, near the site of an old Cistercian monastery—a plant which is said to have only one other habitat in Scotland.

Perhaps his experiences revealed to him that the department of the healing art in which he was most defective was what to a general practitioner is the all-important department of midwifery. He had a keen scientific bent, greatly fostered by association with his fellow-townsman and room-mate in their college days, Dr. John Reid, who afterwards became Professor of Physiology in St. Andrews; and, as the midwifery lectures were not delivered till between three and four in the afternoon, he told me that, when he attended Professor Hamilton in 1829-30, he regularly went off to sleep. Hence, when he returned to Edinburgh to fit himself for taking the University degree of M.D., he attended three of the courses of lectures given by Dr. Thatcher, one of the extra-mural lecturers who was afterwards a rival in his contest for the chair. With this exception, he had given no special attention to the sphere of medicine with which his name was to be for ever associated, and at the time he attended Thatcher's lectures he was acting as first assistant to Dr. John Gairdner, who said of him that "his abilities and attention promise the most flattering expectations."

His First Situation.

The subject of the thesis which he had to submit for the obtaining of the doctorate, in 1832, was a pathological one—*De causâ mortis in quibusdam inflammationibus proximâ*—written, according to the custom of the time, in Latin. This thesis fell into the hands of Dr. John Thomson, who had been appointed to the chair of Pathology, founded at his own instance just a year previously. Professor Thomson, father of William and Allen Thomson, who filled with such distinction the chairs respectively of Practice of Physic and Anatomy in the University

of Glasgow, was so struck with the ability of the young graduate that he offered him the position of assistant at a salary of £50 a year. It was his first offer of a definite position and was gladly embraced. He had not only to assist the professor in the arranging of his museum and writing descriptions of his preparations and drawings, but also in the composition of his lectures. On one occasion he had written, at the request of his "chief," part of a lecture dealing with microscopic observations which were then quite novel. His young enthusiasm led him to write strongly of the importance of these researches, and of the light which the use of the microscope was likely to throw on various pathological problems. It was only ready in time for the professor to take into the class-room without previous perusal. Several times as he read the lecture to the class he looked up from his paper to glower at his assistant; and when they got to the side-room he shook his fist in his face, saying, "I don't believe one —— word of it." But though Thomson was sceptical as to the value of the instrument that was to revolutionise his science, he had the shrewdness to recognise the rare gifts of his young assistant, and when he was unable to conduct his course in the session 1837-38, he got Simpson appointed as interim lecturer.

Becomes Obstetrician.

He it was who first pointed out that in the sphere of midwifery Simpson would find the most fitting field for the exercise of his faculties; and, through the kindness of Dr. Moir, I can show you the note with which he furnished the student graduate when he advised him to get the profit of another course of the lectures of his colleague, Professor Hamilton. It reads:—

"My Dear Sir,—I beg leave to introduce to you the bearer of this note, Dr. James Simpson, an old pupil of your own, who has acted as my amanuensis for a long time. He is desirous to attend your lectures this winter, and I shall feel particularly obliged to you if you will have the goodness to give him a ticket for that purpose, and shall be happy in an opportunity at any time of obliging you in a similar manner.—Yours faithfully,

"John Thomson.

"80 George Street,
19*th November* 1833."

It was thus not till he had been for more than a year a graduate that he set himself earnestly to master midwifery, and busy though he necessarily was with pathology, by the time he had to read a dissertation to the Royal Medical Society in November 1835, he produced a work on *Diseases of the Placenta*, which is still a classic. In 1838 he began an independent course of lectures on his chosen theme, and felt so confident of success that as the professors entered on one occasion

for the "capping," which he had taken some lady friends to see in the University, he pointed to Professor Hamilton and said, "Do you see that old gentleman?—well, that's my gown." On the 4th of February 1840 the sagacious Town Council gave him the right to wear it, and commissioned him to teach midwifery and the diseases of women and children. When my father told Dr. Dawson of the happy event, the old man only said, "It's all very well to have got his chair. But you know he can never have such a practice as Professor Hamilton. Why, ladies have even been known to come from England to consult him." Happily he lived long enough to see ladies begin to come from the ends of the earth to consult Hamilton's successor.

Professor of Midwifery.

When Simpson took up the duties of that chair, it soon became manifest that a master mind had begun to deal with midwifery and the diseases of women. If it has been truly said that "he gave a new life to Obstetric art and science," it may be said that as for Gynecology he presided at its birth. It was born *eo obstetrice*. His genius showed itself (1) in his power of seeing things; (2) in his power of adapting means to ends; and (3) in his power of making others see what he had seen, and do what he had done. Let me illustrate this, first from the obstetric, and then from the gynecological department of his work.

Here is the cast of the head of a child which he helped Dr. Burns to deliver by means of Murphy's craniotomy forceps. After breaking up the skull he left the patient, according to the then common practice, to allow the uterus to recover its tone, and to give time for the commencing swelling of the passages to subside. Returning in a few hours, he found to his surprise that the head had already descended through the narrow brim, and the child was easily extracted. Surely such an occurrence was not novel. But Simpson saw it. He saw that unintentionally he had fractured the occiput close to the foramen magnum. He reasoned that if we could in every case fracture the base of the skull, the extraction of the head would be facilitated, and he set himself to contrive the cranioclast. As soon as he had proved its efficacy he published an account of it, and, as modified by Braun of Vienna, it speedily superseded all previous methods of reduction of the head.

In this jar you see a preparation of a uterus containing a fibrous polypus, the neck of which is in process of separation, resulting in a fatal hæmorrhage. Aided by the sound, which he had not long previously invented, he and his friend Dr. Alexander Wood, who had called him in to see the patient, formed a shrewd guess as to the cause of the patient's floodings; but they were not allowed to use any means to get at the seat of mischief. It would, I presume, be now impossible to

obtain such a preparation, for Simpson saw how that life might have been rescued if only they had had the power of opening up the cervix, and he contrived the now familiar sponge-tent for the purpose. Of course, other methods of dilating the canal have also been employed since then, but until Simpson saw that uterus, and showed how simply such patients could be cured, the writers on female diseases spoke of the *diagnosis* even of intra-uterine polypus as always doubtful, and in most instances impossible. Nothing more easy now both to recognise and to remove. He never kept anything secret that he thought could help his fellows, and it is hard to say whether his delight was greater in finding some new means to cure disease, or in demonstrating to others his methods of treatment.

The note-books of his student days are studded with points of interrogation attached to the dicta of his teachers. After he began to have Nature for his teacher, he questioned her at every turn, and ever and anon she yielded up to him some secret.

His Versatility.

Surely there never was another to whom so many practitioners came to get new lessons in the healing art. For more than a quarter of a century, hardly a day, and never a week passed without bringing doctors to the house, to whom he had something fresh to show. The country doctor who came with a patient was shown others with kindred ailments, saw how they were being treated, and went back to his solitary sphere with new confidence and success. The foreign professor, who had been doubtful as to some procedures, came and stayed for a week or two, till he was satisfied of their feasibility, and returned to put them in practice, and teach them to his students. Younger men would come from all quarters, both of the old world and the new, to spend sometimes weeks, and sometimes months together, studying his principles and observing his practice, and then go to propagate them everywhere.

I do not attempt to speak of the work he did outside his profession, in archæology ; in literature ; in politics, local and imperial ; in university and medical reforms ; and in many varieties of philanthropic enterprise. The great brain was never at rest, and found its recreation only in change of interest. Within the range of his profession his interests were not confined to the special department of his chair. Foreigners working in the sphere of surgery sometimes spoke of him as a surgeon. His old master, Professor Thomson, had told the Town Council of his day that he was "fully qualified to conduct the business of the Pathology class ;" and when Alison died in 1854 there were many who wished he would take the chair of Practice of Physic. Ere the day of anæsthesia dawned he had begun to vivify Midwifery and to bring Gynecology into

being as a science. Had he never lulled for woman her travail pangs, his name would still have been written among the immortals in his art. "Gifted," said his colleague, Professor Miller, in 1848, "with talents that are given to few; armed with a zeal and enthusiasm which are absolutely indefatigable; restless and eager, yet withal careful and scrupulous in his research for truth; full of a pure and large-hearted benevolence—he has made many discoveries and improvements in his profession, which are of themselves well capable of transmitting his name safe and honoured to posterity. But all are eclipsed in this his latest and his best. We admire his talents; we praise his zeal; we rejoice in his success; and while we honour his genius, we love the man."

One of Her Majesty's Physicians.

Before the news came from America that surgical operations might be carried out painlessly on patients narcotised with ether, his high position in the profession had been acknowledged in the highest quarters. Just at that time one of Her Majesty's physicians for Scotland died, and the Duchess of Sutherland, Mistress of the Robes, requested of the Queen to appoint Dr. Simpson to the vacant office. While he was conducting his first anæsthetic labour, this letter from Her Grace was on its way to Edinburgh:—

"Stafford House,
January 18th.

"Dear Sir,—It was a great pleasure to me to receive yesterday a letter from the Queen, telling me that she should have much pleasure in complying with the request 'which his high character and abilities make him very fit for.' The Queen adds that it will be officially communicated to you.—I remain, Dear Sir, yours very truly,

"Harriet Sutherland."

The contents of Her Grace's note he communicated to his brother on the Friday following, the 22nd, in a letter which was never meant to be read beyond the family circle, but from which I quote two characteristic sentences:—"Flattery *from the Queen* is perhaps *not* common flattery, but I am far less interested in it than in having delivered a woman this week *without* any pain while inhaling sulphuric ether. I can think of naught else."

Prepared to Welcome Discovery of Anæsthesia.

This utterance reveals to us a quality which made him welcome with a peculiar eagerness the new discovery, and expend all his energies for its development—that is his delight in the lessening of pain. The great strong brain was matched with a great tender heart. In his student days he was so distressed with the screams and groans of a

poor Highland woman on whom Liston was performing excision of the mamma, that he quitted the Infirmary in sadness, and betook himself to the Parliament House. He thought of seeking work in some writer's office. On further reflection he returned to the scenes of suffering, with the problem pressing on his heart and mind how the pains might be relieved. In lecturing to students or addressing graduates he never wearied in insisting that "the proud mission of the physician is distinctly twofold—viz. to alleviate human suffering as well as to preserve human life." Ten years before the anæsthetic virtue of ether vapour was made known, whilst he was first establishing himself in practice, he made experiments with hypnotism, which Abercrombie, Alison, and other leaders of the profession came to his hospital to see. So when the news reached Edinburgh in 1846 that Liston had performed some operations on patients narcotised with ether, Simpson immediately began to inquire whether in the inhalation of sulphuric ether there might not at length be found the means he had been dreaming of for years of soothing the most agonising pains to which humanity is subject, the pains he had so often to watch with pitying helplessness—the pains of woman in travail.

First Midwifery Case Selected for Scientific Experiment.

The idea of surgical anæsthesia was not new. It was easy to believe that a means had at last been found of producing it. But to put to sleep a woman in labour is another and a new idea. In realising it, problems have to be faced that do not meet the surgeon. Bigelow, of Boston, and Liston, of London, for example, had the fancy that the benefits of anæsthesia in surgery would be principally seen in the practice of swift operators who had remarkable powers of execution, and in whose hands the patient would be for the briefest possible space under the influence of the anæsthetic. If it was to be used in midwifery at all it would require prolonged administration. That and other problems had to be met, and ere Simpson entered on the field it is very worthy of note that, eager as he was to prove the virtue of the new anodyne, he was careful to select a case that was fitted to afford a solution of the most important of the problems. The case, as we have seen, was one of deformed pelvis, in regard to which he says, "I had predetermined to extract the child by turning, and to try the inhalation of ether vapour upon the mother, with a view to facilitate that operation. During a week or two previously, I had anxiously waited for the supervention of labour in this patient; for, by the result I expected that much would be decided in regard to ether-inhalation in parturition. Would it merely avert and abrogate the sufferings of the mother without interfering with the uterine contractions? or, would it arrest simultaneously both the contractions of the uterus and the

sufferings that arise from them? As far as the proposed mode of delivery by turning was concerned, it was a matter of no vital importance whether the etherisation stopped the uterine contractions or not. And on this circumstance depended the eligibility of the case for a first trial of ether-inhalation. The result was most satisfactory and most important; for it at once afforded me evidence of the one great fact upon which the whole practice of anæsthesia in midwifery is founded—it proved, namely, that though the *physical sufferings* of the parturient patient could be annulled by the employment of ether-inhalation, yet the *muscular contractions* of the uterus were not necessarily interfered with; or, in other words, that the labour might go on in its course although the sensations of pain usually attendant upon it were for the time being altogether abrogated."

Conclusions from Series of Observations.

Having satisfied himself from his careful observation of this case that ether could avert the pains without arresting the contractions of the uterus, he proceeded to make application of it in other patients, and at the next meeting of the Obstetrical Society, on 10th February, he was able to give the history of etherisation in some cases of natural labour, and in one forceps case. The inferences that appeared deducible from these observations he stated in the following terms:—

"1. That the inhalation of ether procured for the patient a more or less perfect immunity from the conscious pain and suffering attendant upon labour;

"2. That it did not, however, diminish the strength or regularity of the contractions of the uterus;

"3. That, on the other hand, it apparently (more especially when combined with ergot) sometimes increased them in severity and number;

"4. That the contraction of the uterus after delivery seemed perfect and healthy when it was administered;

"5. That the reflex assistant contractions of the abdominal muscles, &c., were apparently most easily called into action by artificial irritation and pressure on the vagina, &c., when the patient was in an etherised state;

"6. That its employment might not only save the mother from the mere pain in the last stage of labour, but might probably save her also, in some degree, from the occurrence and consequences of the nervous shock attendant upon delivery, and thereby reduce the danger and fatality of childbed; and

"7. Its exhibition did not seem to be injurious to the child."

In the early experiments the patients were not kept anæsthetised for more than half an hour, but in the course of the three or four

following weeks, he ascertained that anæsthesia could be safely kept up during labour for one, two, three, and even six hours.

Spread of the Practice.

Having at once, as we have seen, communicated the success of his first experiment to his professional brethren, his example was followed, first in France by Fournier Deschamps, on 27th January, and then by Baron Dubois, who, on 23rd February, reported to the French Academy of Medicine the results of his experience, with the five following conclusions:—

"1. The inhalation of ether can annul the pain of obstetrical operations.

"2. It can suspend the physiological pains of labour.

"3. It destroys neither the uterine contractions nor the contractions of the abdominal muscles.

"4. It diminishes the natural resistance of the perineum.

"5. It does not appear to act unfavourably on the health or life of the infant."

In London, Dr. Murphy first, on 13th February, and Dr. Prothero Smith in March, took up the practice. In Germany the first case of anæsthetic midwifery occurred on the 24th of February, under the care of Professor Martin, of Jena. "In America," says Simpson in his report on the early history and progress of anæsthetic midwifery, "the country to which we are indebted for the first knowledge of the anæsthetic effects of sulphuric ether in surgical operations, the same agent was not employed in midwifery till the reports of its use in obstetric practice in Europe had recrossed the Atlantic." It was on the 7th of April that it was first employed in a case of labour by Dr. Keep, of Boston.

Interest of the Community in Anæsthesia.

In surgical practice the superinduction of anæsthesia was already meeting with opposition, which became only the more pronounced when it began to be employed in the practice of midwifery. In Edinburgh, in the early days of anæsthesia, many of the citizens found their way to the operating theatre in the Royal Infirmary, "among them," says Professor Miller, "the great, the good, the singularly humane Chalmers, and it was one of the early triumphs of anæsthesia here to see that man of large and tender heart witnessing a bloody and severe operation with composure and serenity, feeling little because the patient felt not at all."

Opposition to Anæsthesia.

But all are not gifted with the open mind and the large heart of a Chalmers. Objections began to be heard on every hand that the novel

practice was unnecessary, was dangerous, was impious, and that no good could come of it; and the loudest and most persistent objectors were found strangely enough among members of the profession, which, through all the ages, had been trying to lessen the sufferings of mankind. On the man who first dared to apply it for the relief of the pains of labour, fell the task of enlightening ignorance, of disarming prejudice, of dispelling superstition, and of vindicating for surgeons and accoucheurs the right to give, and for sufferers to claim, the ease that anæsthesia was calculated to afford.

Religious Objections.

To some minds it seemed that the proposal to still the sufferings of a parturient woman was to run counter to a divine command. "It has been ordered," wrote a medical opponent of the practice, "that in sorrow shall she bring forth." Simpson wrote a pamphlet in "Answer to the Religious Objections advanced against the Employment of Anæsthetic Agents in Midwifery and Surgery." It is an excellent example of his polemic power, proving from Scripture that the primeval curse as it bore on woman and on the ground was not immutable. He quoted "the sound and excellent Matthew Henry, in his own quaint, pithy, and zealous style," showing "how admirably the satisfaction our Lord Jesus Christ made by His death and sufferings answered the sentence now passed upon our first patient. . . . 'Thus is the plaister as wide as the wound.'" He indicated from the study of the Hebrew roots that to lessen the attendant pain was not to lessen the labour effort that the words seemed to demand. And then he pointed out how the objections raised against the practice of anæsthesia were applicable to improvements in agricultural processes, and had been applied to many discoveries in science and art—even the healing art, as in the case of vaccination. A clergyman spoke of chloroform as "a decoy of Satan," and his friend, George Gilfillan, furnished him with evidence that when fanners first came into use, a clergyman debarred from the communion those members of his flock who used what was termed "the Devil's wind." He was amused to find soon afterwards one of his students, a son of De Quincey, in his graduation thesis rebuking the unmarried ladies who stood up for what they thought was the divine law, and who insisted on their parturient sisters suffering according to the letter, in this fashion:—"The unhappy and wicked woman who remains unmarried appears to break the command herself in four several ways, according to the following tabular statement:—

"1. She has no conception.
"2. She brings forth no children.
"3. Her desire is not to her husband.
"4. The husband does not rule over her."

It pleased him to find De Quincey himself, in a letter appended to

the thesis of his son, arguing that "if pain, when carried to the stage which we call agony or intense struggle among vital functions, brings with it some danger to life, then it will follow that knowingly to reject a means of mitigating or wholly cancelling the danger, now that such means has been discovered and tested, travels on the road towards suicide. It is even worse than an ordinary movement in that direction; because it makes God an accomplice, through the Scriptures, in this suicidal movement, nay, the primal instigator to it, by means of a supposed curse interdicting the use of any means whatever (though revealed by Himself) for annulling that curse."

Moral Objections.

Besides the religious objections, there were what he was wont to speak of in his lectures as the moral objections. These in their various expressions were all based on the idea that the practice was unnatural. This idea, pervading the general community, and likely to prevent sufferers from obtaining the benefit of the new discovery, was vigorously championed by the various medical authorities who took it upon them to write down anæsthesia. Professor Meigs thought it "unnecessary, as shown by the birth of past myriads." Dr. Merriman spoke of "the great superiority of allowing Nature to conduct the whole process of the birth." Dr. Ashwell decried it as an "unnecessary interference with the providentially arranged process of labour." Dr. Montgomery, the then chief of the great Dublin School of Midwifery, wrote during the session a letter to Edinburgh, in which he said, "I do not believe that anyone in Dublin has as yet used ether in midwifery; the feeling is very strong against its use in ordinary cases, and merely to avert the ordinary amount of pain which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural labour, and in this feeling I heartily and entirely concur." I have before me the sheet from his lecture-notes, on which Dr. Montgomery's letter had been copied by Dr. Matthews Duncan, who was then junior assistant to Professor Simpson. Above the words "ether," "midwifery," &c., the professor has marked alternative readings. He would take one of these, suggestive of a doctor making his daily round among his patients, and ask you to imagine Dr. Montgomery writing, "I do not believe that anyone in Dublin has as yet used a carriage in locomotion; the feeling is very strong against its use in ordinary progression, and merely to avert the ordinary amount of fatigue which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural walking, and in this feeling I heartily and entirely concur."

Medical Objections.

Then there were various objections of a more distinctly medical kind. It was alleged that the use of anæsthetics would increase

the mortality of surgical operations. Simpson wrote papers full of laboriously collected statistics, which proved that while before the introduction of anæsthesia, in every 100 cases of amputation of the thigh performed in our hospitals, from 40 to 50 of the patients died, the same amputation when performed upon anæsthetised patients did not prove fatal to more than 25 in the 100 cases; or, in other words, that out of every 100 such operations the previous induction of anæsthesia was the means of preserving 15 or 20 human lives.

When obstetricians alleged that no good was gained by the relief of suffering, and when Meigs, for example, went so far as to speak of pain as "a desirable, salutary, and conservative manifestation of life-force," Simpson turned to the reports of the Dublin Lying-in Hospital, and showed that out of all the women—7050 in number—who were delivered within two hours from the commencement of labour only 22 died, *or* 1 *in every* 320; whereas in 452 cases where the labour was prolonged above *twenty* hours, 42 of the mothers died, *or* 1 *in every* 11; "a difference," as he said, "enormous in amount and strongly calculated to force us all to think seriously and dispassionately of the effects of severe suffering upon the maternal constitution."

When it was alleged further that the use of anæsthetics might produce mental derangement, convulsions, paralysis, pericarditis, puerperal fever, and other mischiefs, he showed from the results of a constantly widening practice, the futility of such fears; and in regard to some of these complications of labour, and notably in regard to convulsions, experience eventually showed that so far from causing convulsions, the practitioner had been furnished in the administration of chloroform with his most reliable remedy.

The mention of chloroform reminds me that I have been anticipating.

Is Sulphuric Ether the Only Anæsthetic?

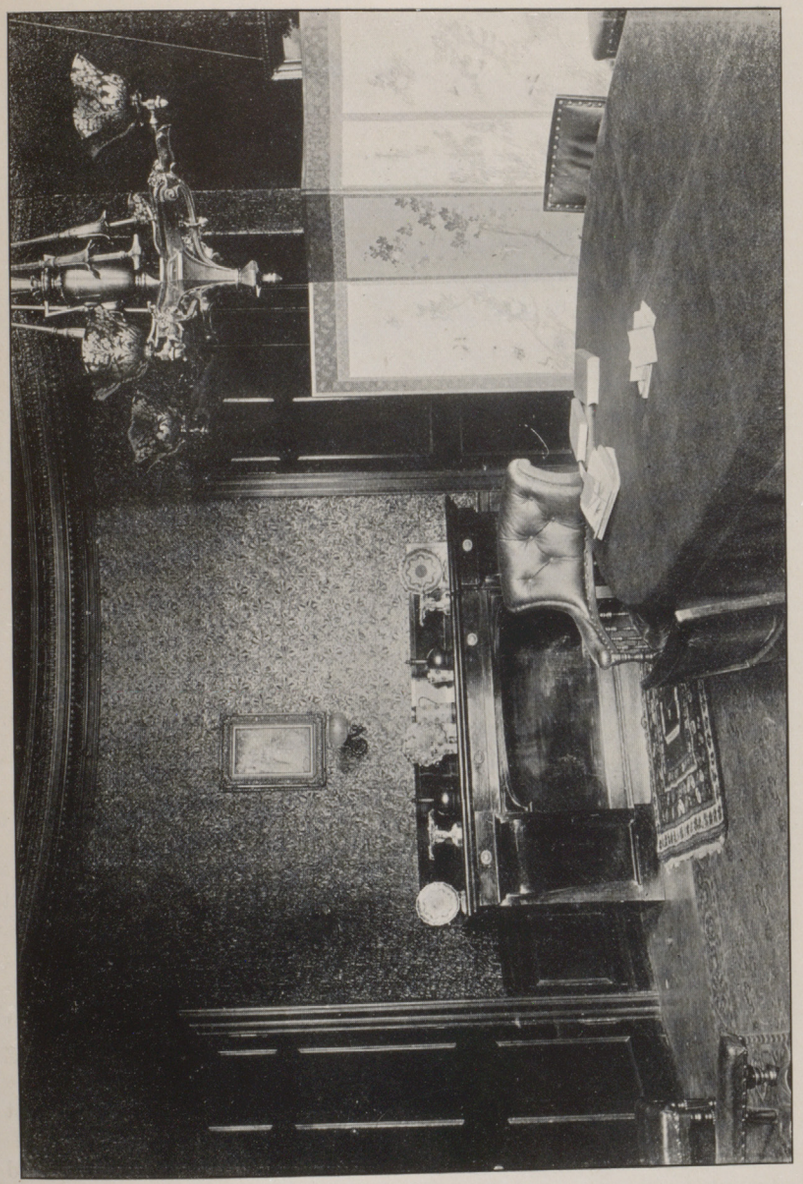
The mind that had riddled the student note-books with points of interrogation was bound to inquire whether Nature had not concealed among her treasures some other agent that might be possessed of the anæsthetic properties of sulphuric ether, without some of its attendant drawbacks. Ether, he noted, required to be administered in large quantities, especially in protracted cases of labour. It occasionally gave rise to bronchial irritations. Its odour was disagreeable and persistent, and hung for long about an accoucheur who had delivered a woman under its influence. He began to inquire whether other anodyne drugs could not be administered through the lungs, and got the chemists, Duncan, Flockhart & Co., to prepare ethereal tinctures and other vaporisable compounds of various potent sedatives for purposes of experiment. The researches he had made into the history of painless surgery quickened the expectation that other

gases or volatile liquids might yet prove serviceable. He talked the matter over with various professional friends more conversant with chemistry than himself, with teachers of chemistry, with practical chemists and druggists. He was led to make experiment on the inhalation of various liquids that seemed more fragrant and agreeable than ether, such as acetone, nitrate of oxide of ethyle, benzin, the vapour of iodoform, &c. Professor Gregory suggested chloride of hydrocarbon (Dutch liquid), which he tried on himself with dangerous consequences. Mr. Waldie, a Linlithgowshire friend who was in business as a chemist in Liverpool, suggested the terchloride of formyle. A small quantity of it was procured from Duncan, Flockhart & Co., but it seemed a heavy unvolatile-like liquid, and for the time was set aside. He had Dr. George Keith and Dr. Matthews Duncan as his assistants at the time, and he gladly expressed his indebtedness to them "for the great and hearty zeal with which they constantly aided him in conducting the inquiry." They used to put a teaspoonful of the liquid which they were testing in the bottom of a tumbler, cup, or saucer, or finger-glass. If it was not sufficiently volatile the vessel was placed in hot water. The mouth and nostrils were held over the mouth of the vessel and inhalation slowly proceeded with, and notes taken of the effects.

Discovery of Anæsthetic Value of Chloroform.

Professor Miller, who lived next door in Queen Street, and looked in nearly every morning at "52" before starting on his rounds at 9 o'clock, has described the circumstances of the eventful evening when chloroform yielded up the secret of its subtle power in a graphic page, which furnishes a trustworthy record of the discovery. It reads:—

"Most of these experiments were performed after the long day's toil was over—at late night or early morn; and when the greater part of mankind were soundly anæsthetised in the arms of common sleep. Late one evening—it was the 4th of November 1847—on returning home after a weary day's labour, Dr. Simpson, with his two friends and assistants, Drs. Keith and J. M. Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material, which he had formerly set aside on a lumber-table, and which, on account of its great weight, he had hitherto regarded as of no likelihood whatever. That happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of waste paper. And, with each tumbler newly charged, the inhalers resumed their vocation. Immediately an unwonted hilarity seized the party, they became bright-eyed, very



Dining Room, No. 52 Queen Street.
(In which Simpson, George Keith, and Matthews Duncan experimented with chloroform.)

happy, and very loquacious—expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was quiet, and then—a crash. On awakening, Dr. Simpson's first perception was mental—'This is far stronger and better than ether,' said he to himself. His second was, to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned round and saw Dr. Duncan beneath a chair—his jaw dropped, his eyes staring, his head bent half under him; quite unconscious, and snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs, making valorous efforts to overturn the supper-table, or more probably to annihilate everything that was on it; I say, more probably, for frequent repetitions of inhalation have confirmed, in the case of my esteemed friend, a character for maniacal and unrestrainable destructiveness, always under chloroform, in the transition stage. By and by, Dr. Simpson having regained his seat, Dr. Duncan having finished his uncomfortable and unrefreshing slumber, and Dr. Keith having come to an arrangement with the table and its contents, the *sederunt* was resumed. Each expressed himself delighted with this new agent; and its inhalation was repeated many times that night—one of the ladies gallantly taking her place and turn at the table—until the supply of chloroform was fairly exhausted."

Miss Agnes Petrie, the niece who shared in the experiment, amused them by folding her arms across her bosom before she fell quite asleep, and exclaiming "I'm an angel! oh, I'm an angel!" They sat up till 3 A.M., after the vial was empty, searching works on chemistry for its composition and best methods of preparation. Next day, Mr. Hunter, of Duncan, Flockhart & Co., began that distillation from a retort, which has grown in the hands of the firm to be one of the great industries of Edinburgh. When a few days later Professor Miller offered Simpson an opportunity of administering chloroform to an infirmary patient on whom he was to operate for strangulated hernia. Simpson was unable to attend, and it happened, as has sometimes been seen in other surgical cases, that when the skin had been cut through, the patient fainted and died before the operation had been well begun. On the 10th of November Simpson formally communicated his discovery to the Medico-Chirurgical Society at its first meeting for that session, and when his communication was published, in pamphlet form, with a postscript on 15th November, he was able to announce that he had exhibited the chloroform to about fifty individuals "without the slightest bad result of any kind."

The First Chloroform Labour.

As was to be expected, one of the first to experience the relief from suffering afforded by the new anæsthetic was a parturient patient; and he gave at that meeting of the Medico-Chirurgical Society the following history of the case:—

"The lady to whom it was first exhibited during parturition had been previously delivered in the country by perforation of the head of the infant, after a labour of three days' duration. In this, her second confinement, pains supervened a fortnight before the full time. Three hours and a half after they commenced, and ere the first stage of the labour was completed, I placed her under the influence of the chloroform, by moistening, with half a teaspoonful of the liquid, a pocket handkerchief, rolled up into a funnel shape, and with the broad or open end of the funnel placed over her mouth and nostrils. In consequence of the evaporation of the fluid, it was once more renewed in about ten or twelve minutes. The child was expelled in about twenty-five minutes after the inhalation was begun. The mother subsequently remained longer soporose than commonly happens after ether. The squalling of the child did not, as usual, rouse her; and some minutes elapsed after the placenta was expelled, and after the child was removed by the nurse into another room, before the patient awoke. She then turned round and observed to me that she had 'enjoyed a very comfortable sleep, and indeed required it, as she was so tired,[1] but would now be more able for the work before her.' I evaded entering into conversation with her, believing that the most complete possible quietude forms one of the principal secrets for the successful employment of either ether or chloroform. In a little time she again remarked that she was afraid her 'sleep had stopped the pains.' Shortly afterwards, her infant was brought in by the nurse from the adjoining room, and it was a matter of no small difficulty to convince the astonished mother that the labour was entirely over, and that the child presented to her was really her 'own living baby.'"

Seventeen years afterwards his friend, Dr. Adamson, of St. Andrews, sent Simpson this charming photograph that had just been taken by Rogers of a young lady. The accompanying letter told that it was a photograph of the baby of his first chloroform patient, and as you mark the mild angelic air that rests upon the upturned face above the folded hands, you will understand why Dr. Adamson suggested that it might stand for a picture of Anæsthesia, and that it was a pity the girl had not been called by that name.

Simpson believed that he had discovered in chloroform an anæsthetic

[1] "In consequence of extreme anxiety at the unfortunate result of her previous confinement she had slept little or none for one or two nights preceding the commencement of her present accouchement."

that possessed various important advantages over ether, "particularly in obstetric practice; and that, in particular, it is far more portable, more manageable and powerful, more agreeable to inhale, is less exciting than ether, and gives us far greater control and command over the superinduction of the anæsthetic state." His interest in the new anodyne gave additional zest to the eagerness and energy with which he had set himself to demonstrate the right, and even the duty, of surgeons and accoucheurs to make use of anæsthetic agents; and he did not cease his efforts until he had seen the importance of anæsthesia fairly recognised, and such an impetus given to surgical progress as it had never before received, and such as has only been rivalled since when Lister—praised be the Queen who has raised him to the peerage—inaugurated the Antiseptic Era.

Dangers of Anæsthesia.

Of the anæsthetics that have been proposed for use in practice, three alone at the present hour promise to hold an abiding place—nitrous oxide gas, first used by Horace Wells in 1844; sulphuric ether, introduced by William Thomas Green Morton in 1846; and chloroform, the anæsthetic power of which was proved and promulgated by James Young Simpson in 1847. The fatalities that have attended the administration of each of them have led to a continuous search for some agent that might possess their power without their danger. Simpson to the end hoped that such a discovery might be made. The last time he had a pen in his hand he wrote of anæsthetic agents and said—"In all likelihood some will yet be discovered of types superior to any we yet know." When Dr. Snow, who did so much to perfect and promote the practice of anæsthesia, proposed the use of amylene, his proposal was eagerly welcomed. I remember well the enthusiasm with which Professor Tourdes, of Strasburg, invited me to hear a lecture on the new agent in the spring of 1857. When he had sufficiently discoursed on the drawbacks and dangers of ether and chloroform he proceeded to demonstrate the ease and safety with which a rabbit could be brought under the influence of amylene, and whilst he still praised the new agent, when he lifted the bag off its face—the creature was dead. In 1883 I was present at the Obstetrical Section of the Naturforscherversammlung in Freiburg, when Professor Bandl proposed the use of bichloride of methylene as a substitute for chloroform in labour. Professor Hegar, the president, winding up the discussion, said—"Yes, gentlemen, we try anything, everything, but in the end we always come back to chloroform."

It is still a subject of discussion whether ether or chloroform is to be preferred as an anæsthetic. Individual minds and groups of minds have inclined to favour now the one, and now the other. In Professor

Ernst Fraenkel's *Tagesfragen der Operativen Gynäkologie*, which came to hand a few weeks ago, we read, "Convinced adherents of chloroform have grown to be enthusiastic advocates of ether, and then gradually and very quietly turned back into the camp of the chloroformists." What we must all recognise and remember is that no anæsthetic has yet been found regarding which we can affirm that it is free from danger; and in each individual case we must choose the agent that seems best adapted to it. In general we see that Wells' nitrous oxide finds its chief sphere of application in the dentist's office; that surgeons who have command of time, assistants, and apparatus may make use of Morton's sulphuric ether; while the surgeon on the battlefield, the general practitioner in his busy round, and the obstetrician in the lying-in room find themselves best served by Simpson's chloroform.

Simpson's Greatest Discovery.

Any sketch of the man, whose services to anæsthesia we have considered, would be incomplete that took no notice of what was to him the most important incident in his life. One who asked of him in his last days, "What do you consider your greatest discovery?" got for reply—"That I am a sinner, and that Jesus Christ is my Saviour." That discovery came to him on Christmas Day, 1861. One of those great spiritual movements that powerfully influence a community was at that time spreading widely through the land, which had this among other characteristics, that it called out in a remarkable manner all classes of laymen, from nobles to navvies, to take part with the ordained ministers in what were then for the first time described as evangelistic meetings.

We have seen that Simpson's house was a rendezvous for all sorts and conditions of men. The strangest streams of life were constantly flowing through it. Candidates for seats in Parliament or in the Council Chamber of the city, for vacant chairs in the University, for posts in the Infirmary, for lectureships in many schools of medicine, and for pulpits in town or country—all came to seek his advice and bespeak his influence. Antiquaries came with their latest finds; artists and architects sought his opinion of their designs; poets brought him their new poems, and novelists their stories; the Arctic voyager, the African explorer, the traveller from Mecca, missionaries from all parts of heathendom, came with news and gifts of every kind. It could not be but that among the throng there should be some who told him that they had found what his friend, Dr. Hanna, called "the open secret." Salome's son, John, may have been ambitious and of a fiery temper, but he was not a bad man before the day when he heard the Baptist say, "Behold the Lamb of God," and he went and followed Jesus. Mary Jervay's son was not a bad man before that Christmas Day when in prayer with

Mrs. Barbour he saw that the babe of Bethlehem had been born to give him second birth. But it was a new man who from that time began to fence his house with family worship; and when I look into the Bible which he bought to read the Scripture from, I find that where the prophet speaks of One "wounded for our transgressions," he has pencilled above the "our" the possessive singular "my." It was consonant with the great-hearted expansiveness of the man, that he began both in private and in public to share his joy with all who cared to taste of it. His conduct has been variously judged. The simple explanation is that the love of Christ constrained him, and when I last heard him address a meeting in the Free Barony of this city in the winter of 1867-68, there was the same note of personal experience and of wonder at "the infinitude of God's love to our fallen race" which marked his first appeals.

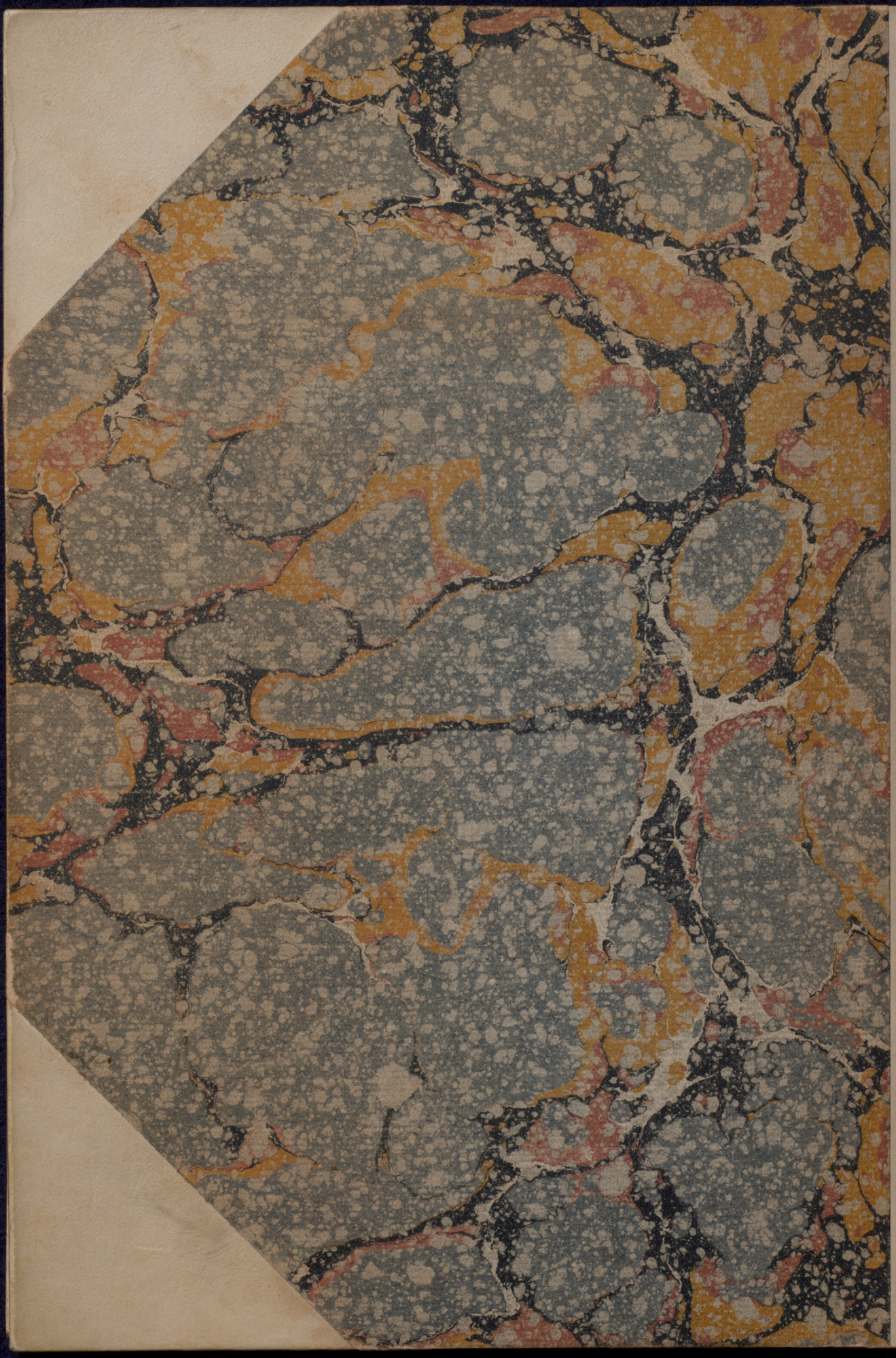
The change in his acknowledged relation to God in no way lessened the service he still delighted to render to his fellows, but it variously affected various minds. An Edinburgh gossip asked Miss Catherine Sinclair if she had heard of his conversion, and that excellent lady replied, "If Professor Simpson has been converted, it is time some of the rest of us were seeing if we do not need to be converted." When he presided at an evangelistic meeting addressed by Dr. Hanna, a woman said the sight of the chairman's happy face had done her as much good as a sermon. He went to a meeting of the Royal Society in the company of his life-long friend, Dr. Skae, of Morningside Asylum, and some of the Fellows thought it a good joke to infer that Simpson had gone mad, and to send round the rumour that Skae was looking after him. "And have you read it?" asked Dr. Andrew Wood of Father Rigg, afterwards Bishop of Dunkeld, when he told him that Professor Simpson had given him a copy of his address, entitled *Dead in Trespasses and Sins*. "Yes," said that good Catholic, "I have read every word of it." "Well, what do you think of it?" "It's the production, sir, of a genius."

When Sir David Brewster died in 1868, Sir James Simpson, who had been asked to move the resolution of regret in the Royal Society of Edinburgh, told how he had seen that "archpriest of science passing fearlessly through the valley of death, sustained and gladdened with the all-simple and all-sufficient faith of a very child." His words described to the letter his own departure in 1870; and if, with Sir David's gifted daughter, we try in imagination to follow these great spirits through tracts unknown, and to see on what high quests they fare forth there, we can only say with her of one as of the other—

> "We see not, we see not; but this we know,
> He has bowed his head with its honours low.
> 'Not mine! not mine!' is his whisper meet,
> As he casts his crown at his Saviour's feet."

THE DISCOVERY OF CHLOROFORM.

In the British Medical Journal of December 14th, 1912 (p. 1681), reference was made to a proposal that the centenary of the birth of David Waldie, who suggested a trial of chloroform as an anaesthetic to Sir James Simpson, should be commemorated by a bronze tablet, to be placed on the house in Linlithgow where he lived for some time. The movement was initiated by Mr. Alexander Spence, member of the Pharmaceutical Society, an ex-sheriff of Linlithgow, now of Leslie, Fife. We learn that the response to this appeal has been gratifying, and that a tablet, designed by Mr. Hope-Pinker of Kensington, has been put up. It has on it a portrait of Waldie, with an inscription in which he is described as a pioneer in anaesthetic research; and it is stated that "to him belongs the distinction of having been the first to recommend and make practicable the use of chloroform in the alleviation of human suffering." Regard for historic truth compels us again to point out that this is an exaggerated claim. Waldie suggested to Simpson, who was then seeking for a substance possessing anaesthetic properties, that chloroform might serve his purpose, and Simpson acknowledges that he got the hint from him. But there Waldie's connexion with "anaesthetic research" seems to end. It was Simpson who, in the face of much opposition from various quarters, including many members of his own profession, gained for chloroform a firm footing in medical practice. Therefore to him rightly belongs the credit of the discovery. In saying this we have no wish to detract from the merits of David Waldie. He was an assistant in the Liverpool Apothecaries' Company when he had the conversation with Simpson which led to such momentous results, and he gave an account of the matter in a paper read at a meeting of the Liverpool Literary and Philosophic Society on November 29th, 1847, three weeks after Simpson had announced the results of his experiments. That account was quoted by the *Chemist and Druggist* of December 21st, 1912, and the substance of it was given in the Journal of January 4th, 1913 (p. 41). Any one interested in the subject will see that the claims made on behalf of Waldie are not borne out by his own statement. Waldie afterwards won distinction in India. He went to Calcutta in 1853, and was an active member of the Asiatic Society of Bengal for twenty-five years. He died at Calcutta in 1889. The society put up a brass tablet to his memory, in which he is described as the "pioneer of chemical industry in India." B. M. J. vol. 19. 13

tive diseases are tuberculosis, hookworm disease, and syphilis. Leprosy is also common, and small-pox is looked upon as an inevitable incident of human life. There is no legal restriction on medical practice. The native materia medica mainly consists of herbs, but modern "patent" medicines command a large sale. The Chinese doctors know nothing of surgery; this is due to their ignorance of anatomy. Dissections and *post-mortem* examinations were not officially authorized till November 22nd, 1913. There are some Chinese physicians trained in Western medicine, but they practise mostly in the treaty ports or are attached to mission hospitals. The medical schools are classed in four categories: (1) Government and private schools; (2) missionary schools; (3) schools for Chinese women, and (4) non-missionary schools under foreign control. The strictly Chinese schools suffer from great disadvantages caused by disturbances of the political atmosphere during the last four years and the financial difficulties of the Government. Not one of them is properly equipped or adequately staffed, and not one has access to a satisfactory hospital. China has three hospitals for women alone, besides two in which they may be educated with men. But these schools are small and poorly equipped, and there is a difficulty in getting students who have had a proper preliminary training. The non-missionary schools under foreign control are five in number: Japanese in Mukden, German in Tsingtau (of this we suppose we may now say *fuit Ilium*) and Shanghai, French in Canton, and English in Hong Kong. The commission found that a study of hospitals in China "resolves itself almost completely into a consideration of the mission hospital. The more important non-missionary hospitals established by foreigners are for the care of foreigners, and have no very definite influence on China itself. The hospitals under Chinese control, whether Government or private, are with few exceptions ineffective, and they are chiefly of interest as demonstrating how small an impression high-grade Western medicine has as yet made on China." Among the

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